Data Description for Davis Pond Nutria Herbivory Survey

General:

The Louisiana Department of Wildlife and Fisheries conducts an annual nutria herbivory survey by flying north-south transects over the Barataria Basin in the spring. Two biologists act as observers, one seated on each side of a helicopter flying at approximately 60 mph.

The transects (shown in Map 2003-04-0031.pdf) are spaced approximately 1.8 miles apart. Flight altitude varies with visibility and vegetation, but an altitude between 300 and 400 feet is considered optimal. Effective transect width is approximately one-half mile.

The observers revisit all locations identified as damaged in previous surveys in order to characterize vegetative recovery.

Transects:

The data sets do not report the transect on which each observation was made, although each site can be matched with a transect by means of its longitude. (See Map 2003-04-0031.pdf)

Transect Number	Longitude
27	90° 32’ 30”
27A	90° 28’ 45”
27B	90° 26’ 52”
27C	90° 30’ 37”
28	90° 25’ 00”
28A	90° 21’ 15”
28B	90° 19’ 22”
28C	90° 23’ 07”
29	90° 17’ 30”
29A	90° 13’ 45”
29B	90° 11’ 52”
29C	90° 15’ 37”
30	90° 10’ 00”
30A	90° 06’ 15”
30B	90° 04’ 22”
30C	90° 08’ 07”
31	90° 02’ 30”
31A	89° 58’ 45”
31C	90° 00’ 36”
32	89° 55’ 00”
32A	89° 51’ 15”
32C	89° 53’ 07”
33	89° 46’ 24”
33C	89° 44’ 30”

Data Column Descriptors:

Year: This column identifies the year.

Site Number: Every observed instance of nutria herbivory is assigned a unique spatial identifier.

Marsh Type: Reports the marsh type as fresh, intermediate, or brackish. The helicopter does not fly over the salt marsh regions of the transects because salt marsh is not a habitat expected to have a high population density of nutria.

Latitude: Reported in decimal degrees, measured using a Trimble Ag 124 differential GPS.

Longitude: Reported in decimal degrees, measured using a Trimble Ag 124 differential GPS.

Herbivore: Beginning with the 2001 survey, the data attribute the damage to either nutria, muskrat, or "other".

Number of Acres Damaged: At sites with widespread damage, the helicopter flies the perimeter of the damaged area, allowing the observers to make multiple GPS readings and thereby estimate the area more exactly. Small areas are measured by visual estimation.

Nutria Relative Abundance Rating (NRAR) and *NRAR Description:* LDWF rates the severity of damage according to the following scale:

(0) no nutria sign visible
(1) nutria sign visible (feeding and trails)
(2) abundant nutria sign
(3) heavy feeding sign (minor vegetative damage)
(4) moderate vegetative damage
(5) severe vegetative damage
(6) converted to open water

"No nutria sign visible" may apply to a site identified as damaged in previous surveys. Otherwise, the observers do not make any record of an undamaged area.

Note: Beginning in 2002, LDWF decided to distinguish between current nutria herbivory and vegetative damage (which may persist years after the nutria have left a site). In the 2002 survey, NRAR ratings 4, 5, and 6 were incorporated into a new variable, the *Vegetative Damage Rating (VDR)*, described below:

Vegetative Damage Rating (VDR) and VDR Description: These entries first appear in the 2002 survey:

(0) no vegetative damage
(1) minor vegetative damage
(2) moderate vegetative damage
(3) severe vegetative damage
(4) converted to open water

Note that ratings 2, 3, and 4 correspond to the old NRAR ratings of 4, 5, and 6.

Age of Damage and *Age Description:* LDWF rates the age of damage according to the following scale:

(0) recovered
(1) old damage, recovering
(2) old damage, not recovering
(3) recent damage, recovering
(4) recent damage, not recovering
(5) current (occurring now)

Recovery Forecast and *Recovery Forecast Description:* LDWF forecasts recovery expected by end of the current growing season:

(0) no recovery predicted
(1) full recovery
(2) partial recovery
(3) increased damage

"No Recovery Predicted" means that the observer predicts that the site will not recover. It does not signify absence of a forecast.

Number of Acres Converted to Open Water: Beginning with the 2002 survey, LDWF reports the number of acres of nutria-damaged marsh converted to open water.

Species Impacted: The 1998 data include a record of the predominant plant species impacted by nutria herbivory.